



Elektrotechnik Karl-Heinz Mauz GmbH

LSM-56M/F (Artikel-Nr. 115150)

EKULIT

SPECIFICATIONS:

TYPE	UNIT	LSM-56M/F
Impedance	Ω	8 \pm 15%
Rated Input Power (long time)	W	3.0
Max. Input Power (1 minute)	W	4.0
Resonant Frequency (Fo)	Hz	250 \pm 20%
Sensitivity (S.P.L.)	dB	78 \pm 3/1.0W/0.5m
Frequency Range	Hz	Fo~20.000
Total Harmonics Distortion		Max. 8%
Voice Coil	\emptyset	13.3mm
Magnet Rare earth permanent		Nd-Fe-B \emptyset 12.5mm
Operation Test		Must be normal at program source – 3.0W
Buzz, Rattle, etc.		Should not be audible at 4.89V sine Wave between Fo to 20kHz
Polarity		When positive voltage is applied to the terminal marked (+), diaphragm should move to the front
Apperance		Should not exist any obstacle to be harmful to normal operation; damages, cracks, rust and distortions, etc.
Terminal Strength		Capable of withstand 1kg load for 30 seconds without resulting in any damage rejection.
Weight	g	22 \pm 0.5
Operating Temperature	$^{\circ}$ C	-20~+60
Storage Temperature	$^{\circ}$ C	-30~+70

Adresse: **Felix-Wankel-Str. 35 • 73760 Ostfildern/Nellingen**

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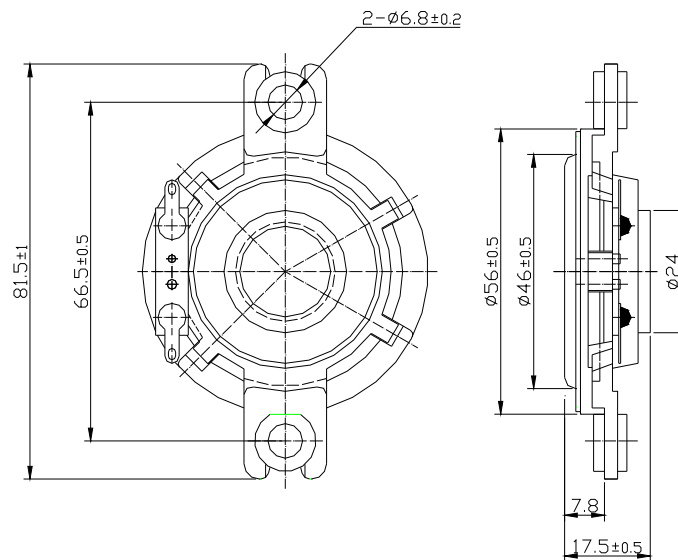
E-mail: **info@ekulit.de** web site: www.EKULIT.de

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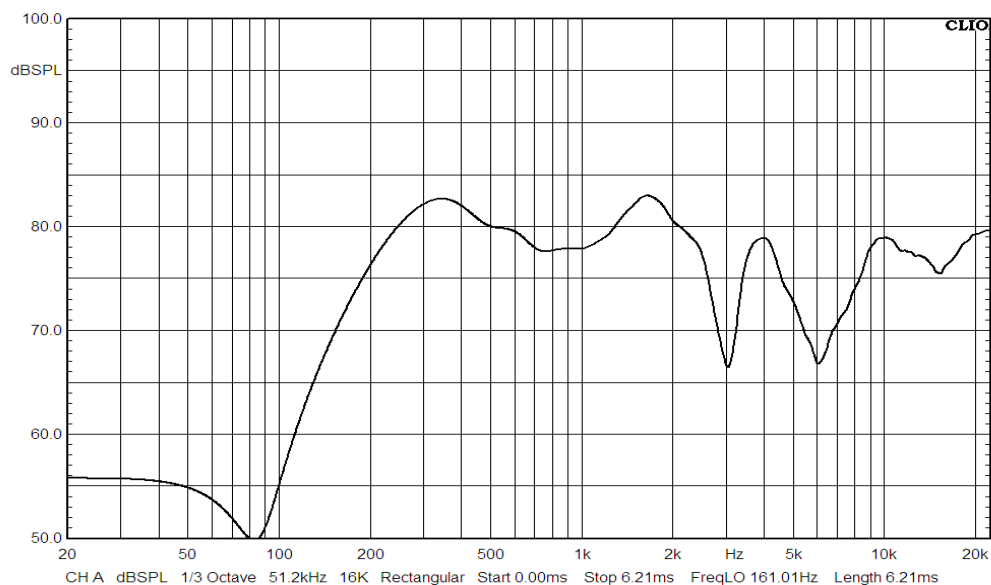
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DIMENSIONS :
(Unit: mm)



Frequency Response Curve:



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MEASURING METHOD

Test Condition

A.STANDARD

Temperature : 15 ~ 35°C

Relative humidity : 25% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

Atmospheric pressure : 860mbar to 1060mbar.

B.BASIC

Temperature : 20±3°C

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

C.Standard Test Fixture

Test and measurement will be carried out under normal condition of temperature within 5°C to 35°C, relative humidity within 45% to 85% and air pressure of 860mbar to 1060mbar.

Should uncertainty arise in data obtained from the above atmosphere, control of temperature at 20°C±2°C and relative humidity within 60% and 70%, with air pressure remaining unchanged, to be enforced.

1. Microphone : B&K 4191

2. Standard Baffle : In IEC 268-5 Where 1350mm x 1650mm

3. Testing Distance : 0.1m

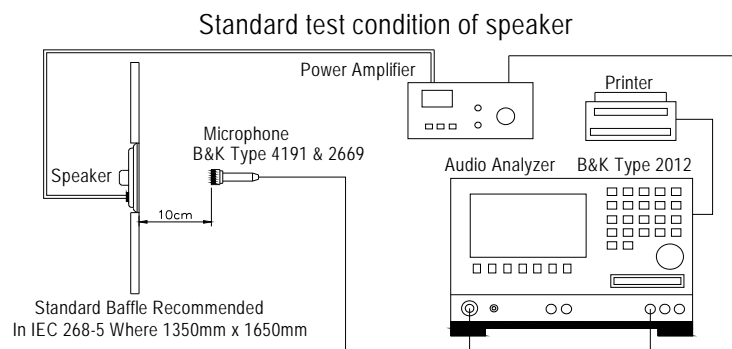
4. Zero Level : -dB

5. Mode : SPEAKER

6. Input Power : 3 W

7. potentiometer Range : 50dB

8. Sweep Time : 0.5sec





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Reliability test

Items.		Specifications
01	High temp. Test	Keep 96 hours at $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
02	Low temp. Test	Keep 96 hours at $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal Temperature and then check
03	Humidity test	Keep 96 hours at $+ 60^{\circ}\text{C}\pm 3^{\circ}\text{C}$ relative humidity 95% and leave 3 hours in normal temperature and then checked.
04	Temp./Humidity cycle	The part shall be subjected 5 cycles. One cycle shall be 12 hours and consist of; <p style="text-align: center;">90 ~ 95 % RH</p> <p style="text-align: center;">65°C</p> <p style="text-align: center;">25°C</p> <p style="text-align: center;">0.5hr 6hrs 0.5hr 5hrs</p>
05	Thermal cycle test.	Low temperature: $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$, temperature: $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$, cycle: 1 hour/cycle each, and then keep 5 cycles in a room.
06	Vibration	10~200~10Hz sin-wave sweep 15min. 5G(constant) X,Y, Z 3 direction. 2 hours each, total 6 hours.
07	Fix drop test	Fix on jig. Then drop from 152cm height to the concrete floor X, y, z 6 direction. 5 times each, total 30 times.
08	Free drop test	Free drop from 100cm height to the concrete floor X, y, z 6 direction. 1 times each, total 6 times.
09	Rated Power test	Rated Power white noise is applied for 96 hours
10	Max Power test	Max power 1 min on – 2 min off 10 cycles.
11	Terminal strength test	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.
Criterion: After these test , the change of S.P.L shall be within ± 3 dB .		

SOLDERING CONDITION

Recommend using constant branding iron in 30W, and in temperature range 350°C.

Soldering time not over 2 seconds.

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